

AMENDMENTS TO THE SPECIFICATION

Beginning on page 3, line 28, please amend the paragraph to read as follows:

Fig. 7 depicts beam forming optics suitable of use with the optical marking mechanism shown in ~~[[Fig.2.]]~~ Fig. 2;

Beginning on page 3, line 31, please amend the paragraph to read as follows:

Fig. 8 depicts one device in which the functions of optical power attenuation and power monitoring in the beam former described in ~~[[Fig.7]]~~ Fig. 7 are combined ~~[[.]]~~ ;

Beginning on page 4, line 1, please amend the paragraph to read as follows:

Fig. 9 depicts one pattern generator suitable for use with the optical marking mechanism of ~~[[Fig.2]]~~ Fig. 2, in which angularly separated beams corresponding to the bands and the tracks within a band are both formed by diffractive optical elements and simultaneously focused on the tape~~[[.]]~~;

Beginning on page 4, line 5, please amend the paragraph to read as follows:

Fig. 10 depicts an alternative embodiment of a pattern generator that employs segmented mirror to generate a plurality of parallel beams, followed by a diffractive optical element to generate the tracks within each hand, and further followed by a lens array to focus the beams onto the tape~~[[.]]~~;

Beginning on page 4, line 10, please amend the paragraph to read as follows:

Fig. 11 depicts the use of a segmented mirror tilted at about 45 degrees to create a number of parallel beams corresponding to the number of bands depicted in ~~[[Fig.9.]]~~ Fig. 9;

B ginning on page 4, line 13, please amend the paragraph to read as follows:

Fig. 12 depicts one segmented mirror for creating the parallel beams depicted in [[Fig.9.]] Fig. 9;

Beginning on page 4, line 16, please amend the paragraph to read as follows:

Fig. 13 depicts yet another method of creating a number of parallel beams using a two-beam segmented mirror in tandem with an optical birefringent plate[.] : and

Beginning on page 8, line 10, please amend the sentence to read as follows:

One example of the type of servo track pattern that can be formed by the systems and methods described herein is depicted in ~~Figs 3 and 4~~ Figs. 3 and 4.

Beginning on page 9, line 17, please amend the paragraph to read as follows:

Turning to [[Fig.5]] Fig. 5, it is shown that the depicted marking mechanism 12 of Fig. 2 can include a track pitch adjustment mechanism that can adjust the spatial characteristics of the patterns being generated. In one practice, the relative pitch, p , between servo tracks can be determined according to the following relationship,

$$p = \Delta s \cos \alpha$$

where Δs is the track pitch at α equal zero degree, and Δs is dictated by the DOE parameters and the focal length of lens, shown 50 in [[Fig.2.]] Fig. 2.

Beginning on page 12, line 32, please amend the paragraph to read as follows:

Turning to [[Fig.11]] Fig. 11 one suitable beam separator, a segmented mirror, 120 is depicted in detail. Specifically, Fig. 11 depicts an incoming beam 121 that is directed to a segmented mirror beam separator 120, which creates a plurality of beams 122 through 125. The

segmented mirror 120 provides an optical flat coated with a pre-determined reflectivity, C1 through C5, at each of the appropriate segment is tilted at ~~[[45°]]~~ 45° to the incident beam, 121. N parallel beams, 122 through 125, are generated upon successive bounces off the exit surface with an intensity of $1 / N^{\text{th}}$ of the incident beam. One example of a design for the segmented mirror 120 is depicted in Figs. 12A and ~~[[12 B]]~~ 12B, where the reflectivity A through E for a four beam generator are 0.75, 0.667 0.5, 0, and 1 respectively.

Beginning on page 13, line 23, please amend the sentence to read as follows:

Turning now to ~~[[Fig. 13]]~~ Fig. 13, there is shown yet another method of generating multiple parallel beams.

Beginning on page 14, line 14, please amend the sentence to read as follows:

One particular embodiment of a stabilizer 34 that can be employed with the systems described herein includes the stabilizer 130 depicted in Figs. ~~[[14A&B.]]~~ 14A and 14B.

Beginning on page 15, line 9, please amend the sentence to read as follows:

In one particular embodiment, the verifier 24 includes ~~[[a]]~~ an optical element similar to that ~~[[disclose]]~~ disclosed in U.S. Patent Application No. 09/191,766, now U.S. Patent 6,246,535, entitled Optical Apparatus For Tracking A Magnetic Tape, by Panish et al., and assigned to the assignee hereof, hereafter called the focalizer.